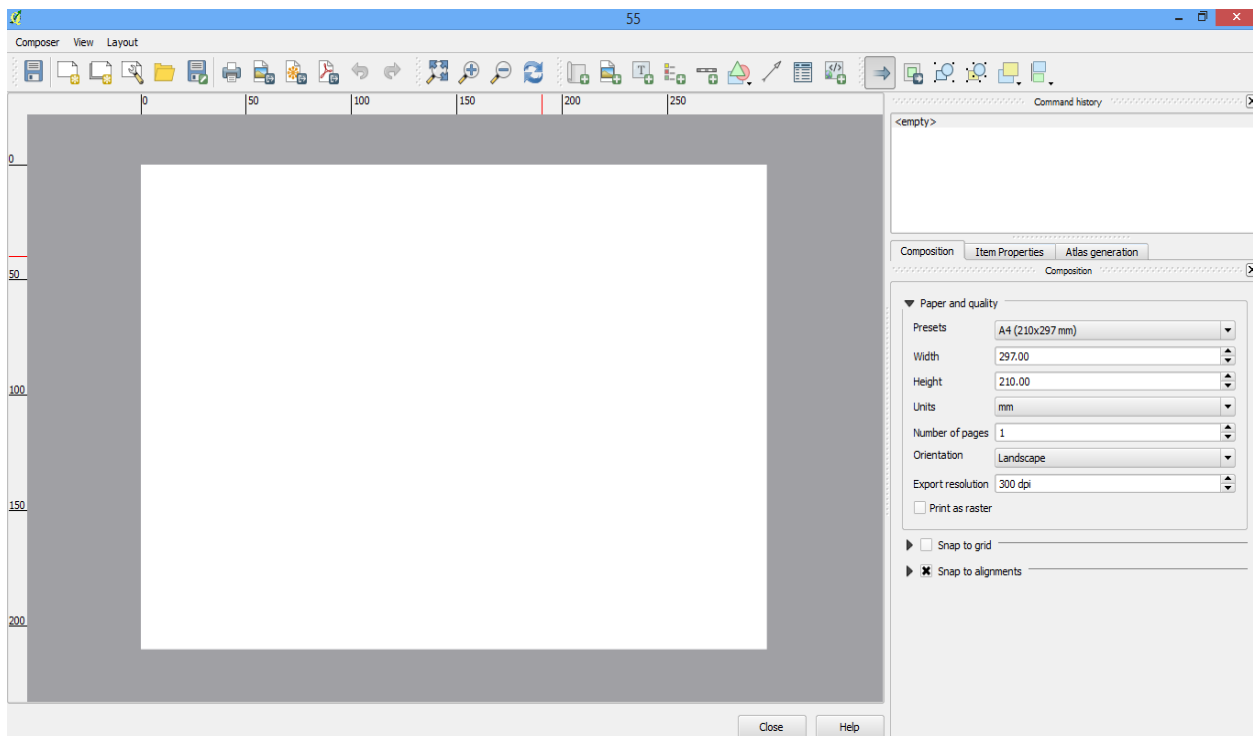# CHAPTER 8

Map Design and Printing

The current map view in our QGIS project can be saved as an image. For this, go to "Project" > "Save as Image…" In addition to this, QGIS Print Composer provides common map layout functions, such as adding titles, legends, north arrow, scale bar, etc, and will export to image formats (such as .jpg, .png) as well as vectorized high-resolution pdf and .svg files.
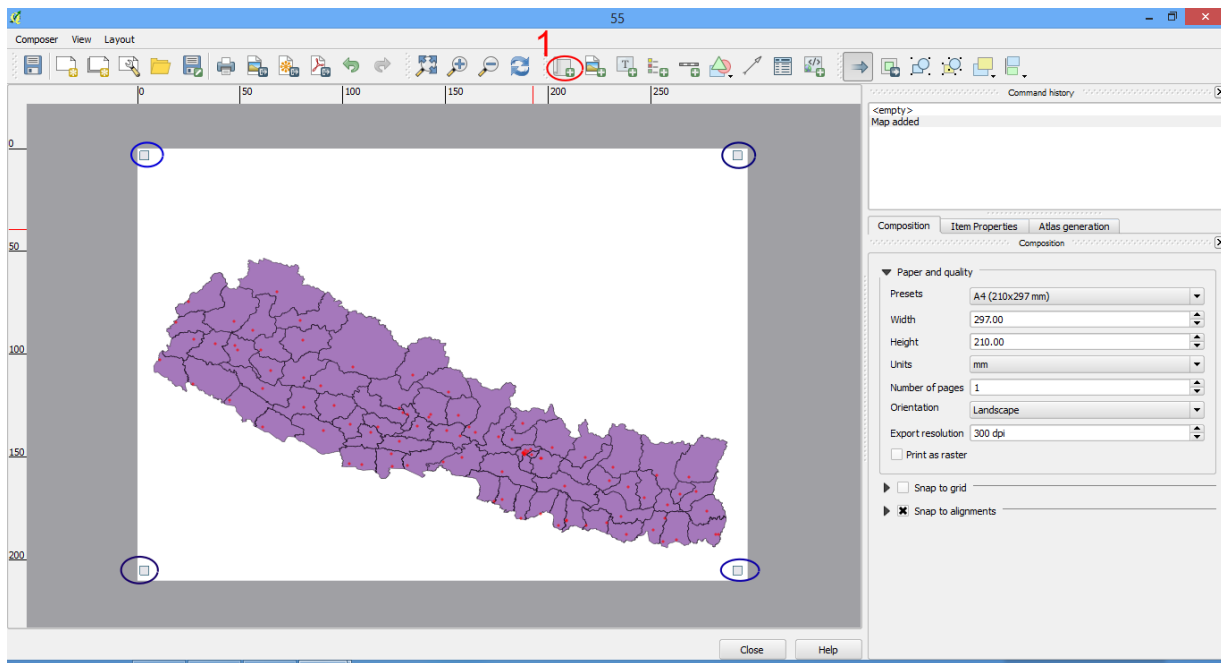
In this chapter we will learn how to compose a map layer and create maps.

- After importing and symbolizing your layers in QGIS you can compose a map layer. Go to the menu "Project" > "New Print Composer". Name your Print Composer.
- A wide window with a blank map layout will appear. On the top of the window are print composer tools and on the right are three tabs: General Settings, Item Settings, and Command History.
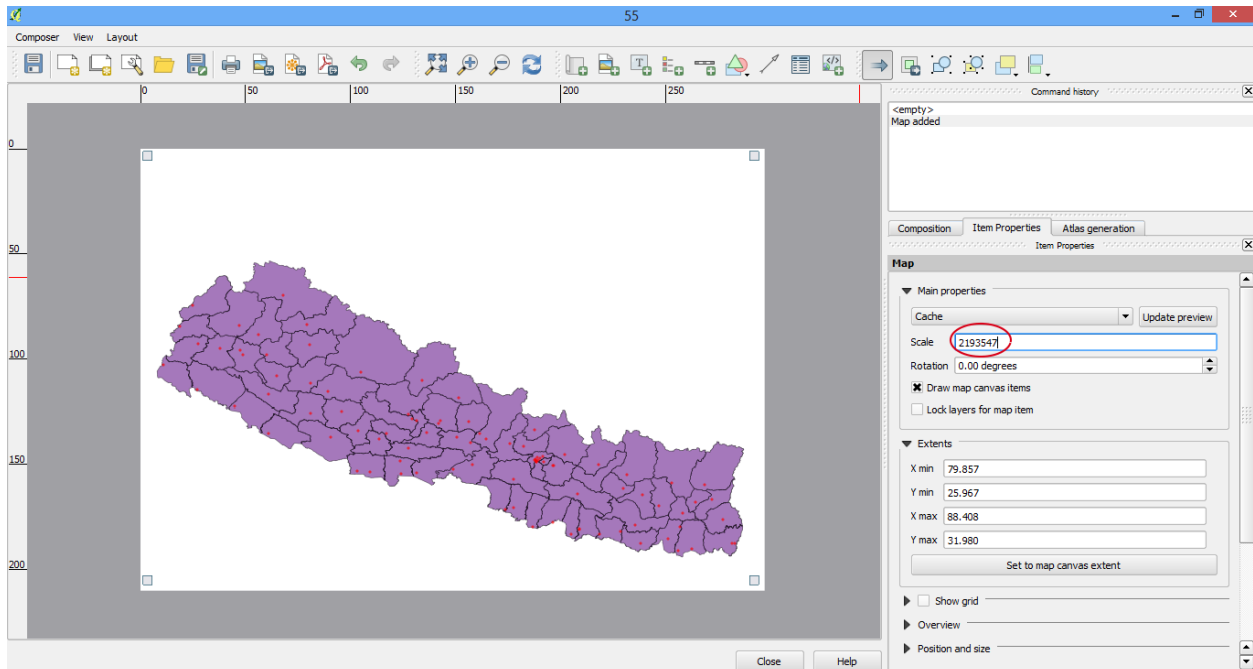

- Click on the "Add New Map button", then drag a box onto the Map Layout area.
- The current map view of the main GIS window will appear in the Map Layout. Drag the corners of the rectangle window to the edges of the Map Layout.
- You can also move the map object by clicking on "Move item content" on the toolbar.
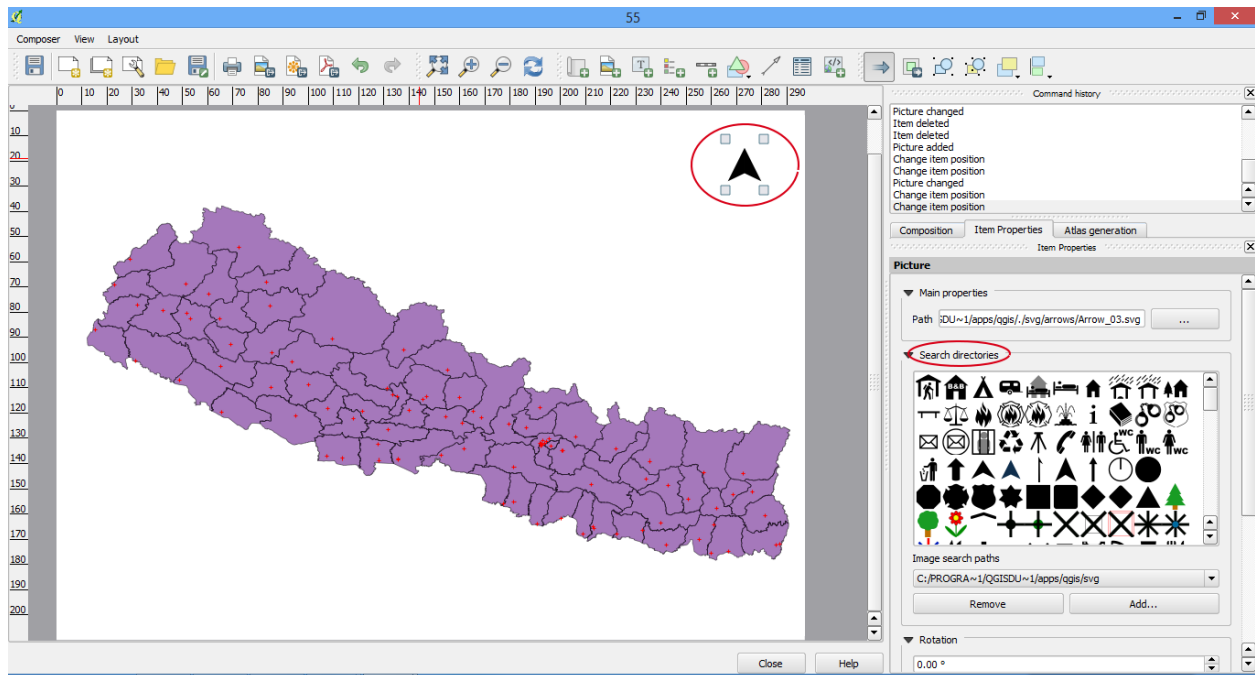
- To zoom in, you can use the mouse scroll-wheel. If you do not have a mouse or want more control, click on the "Item Properties tab" and adjust the Scale value.
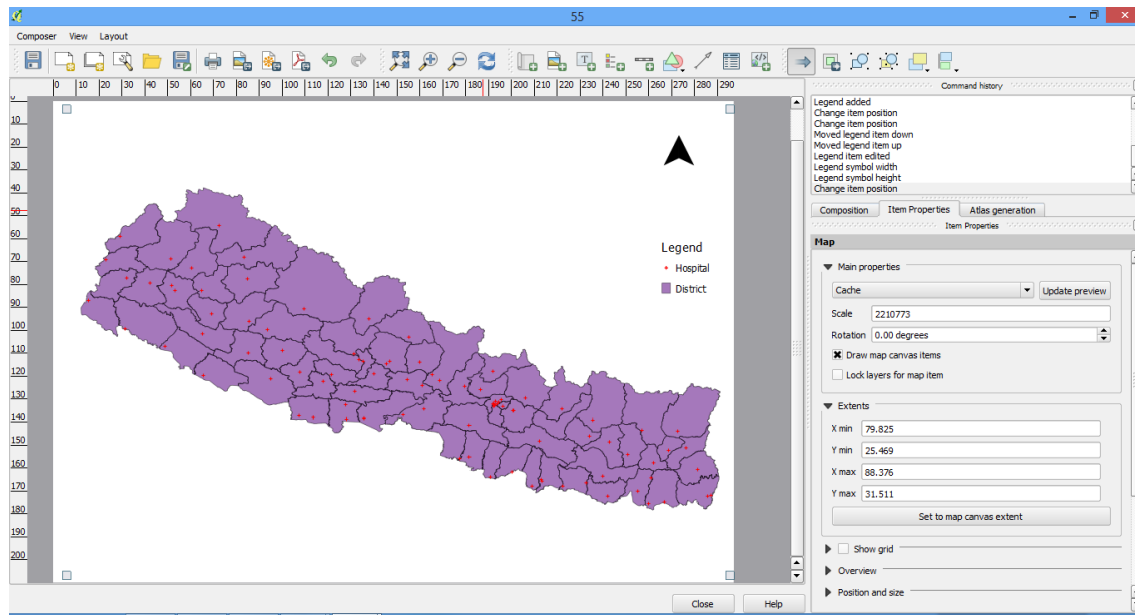

Print Composer has a nice collection of map-related images - including many types of North Arrows. Click "Layout" > "Add Image". Drag a rectangle holding your left mouse button on

the top right corner of the map canvas. Click on "Item Properties" tab and select the North Arrow from the available set. Go to "General Options" tab for controlling the color, size etc.
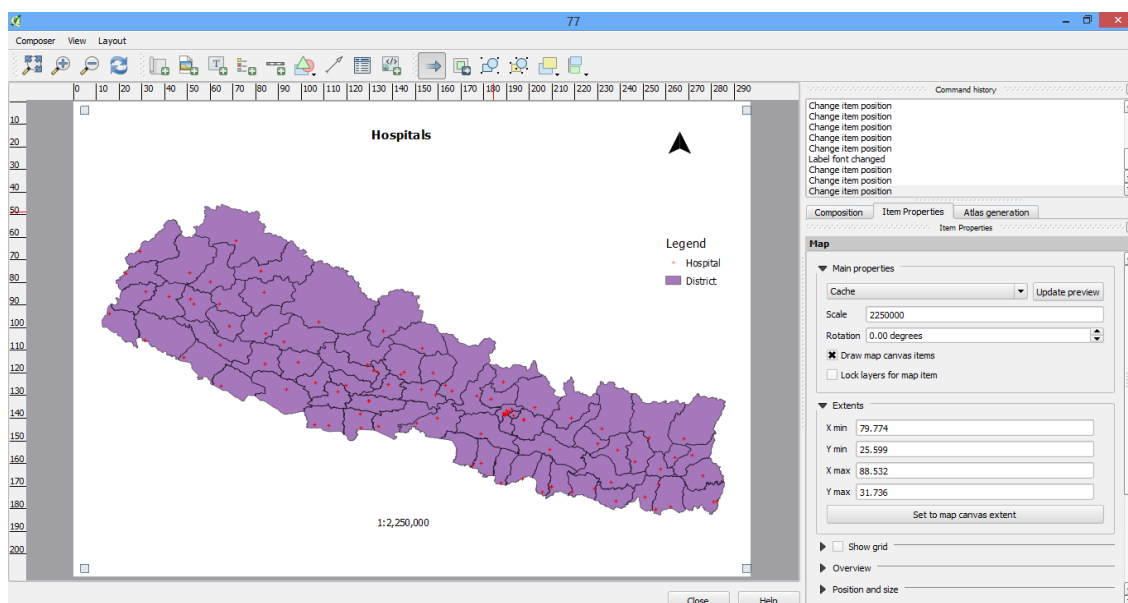

Or, simply click on "Add arrow" on the toolbar and draw one on your map canvas.

- Now add a legend to the map. Click on Layout → Add Legend. Drag a rectangle on the map layout where you want to add the legend box.
- Click on the Item Properties tab and select the layers which you do not want in the legend. Click the '-' button to remove it from the legend. Adjust the transparency and font options from the General Options tab.
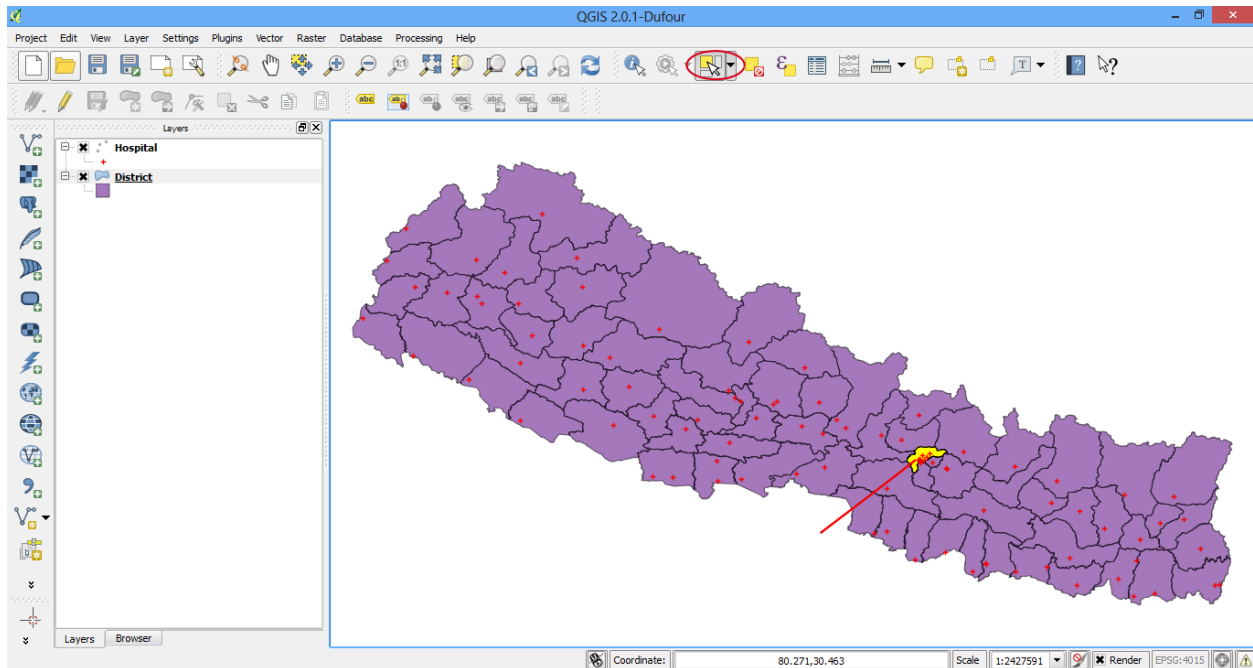
- Similarly add a scalebar and a title bar to your map. To add a scalebar, go to "Add new scalebar" on the toolbar. Drag a rectangle in the area you want to put it on. From the "Item Properties tab", choose the style that fits your requirement. For our exercise we will choose "Numeric" style scale. Click on the map object and enter the appropriate scale. Set the transparency via General Options like in the previous step.

- Click on "Add Label" from the "Layout" tab. Drag and fit a rectangle to the appropriate position. On the right side a "Label" panel will appear. Enter your text in the panel. Here we will write "Hospitals". Click on "Font" tab. Choose "Bold" font type with size "16".
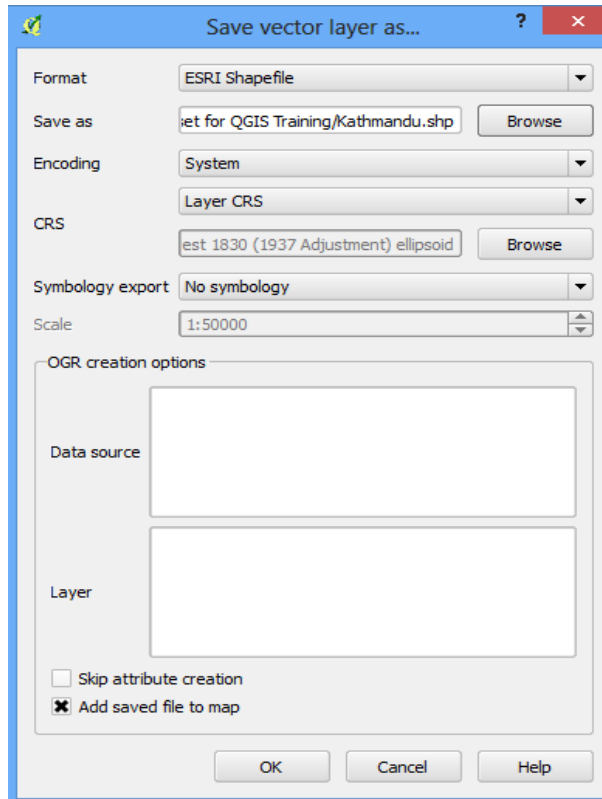
Adding an inset map

Inset map is useful to illustrate additional information to complement existing map. For example, if you want to show the location of Kathmandu in Nepal, you can add an inset map (zoomed map of Kathmandu) on the current map layout.
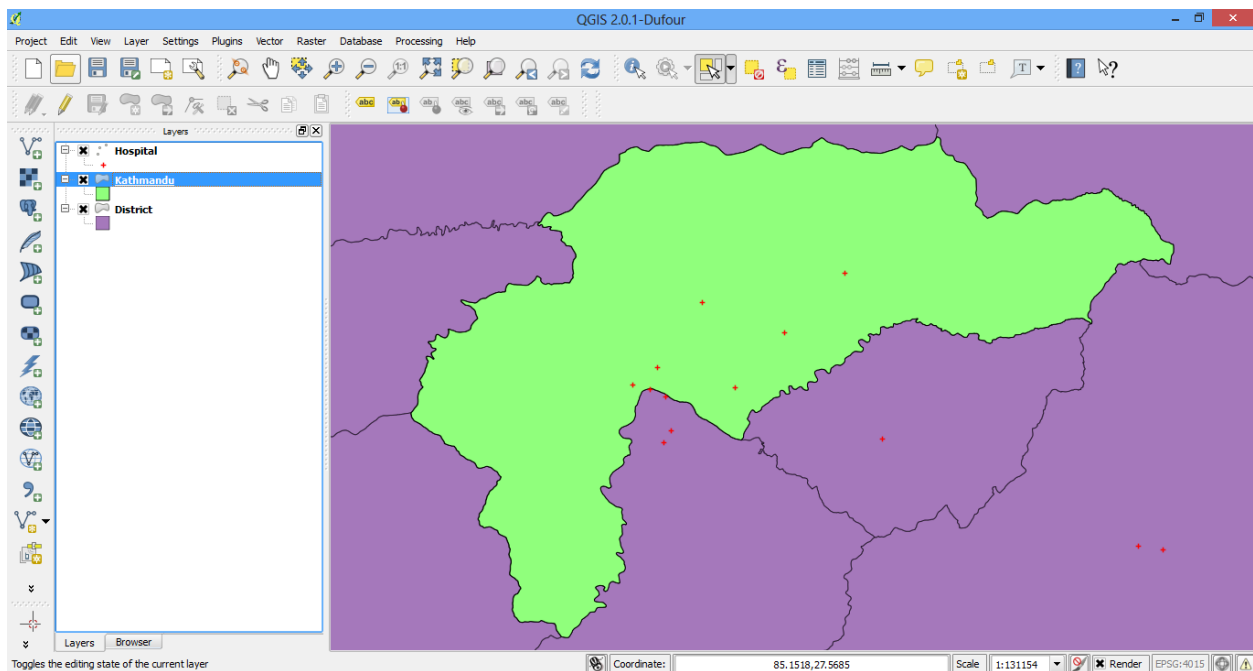
- Go to "Main properties" on the right panel of your print composer. Choose "Cache" from the drop down. It stores the image that you are seeing right now.
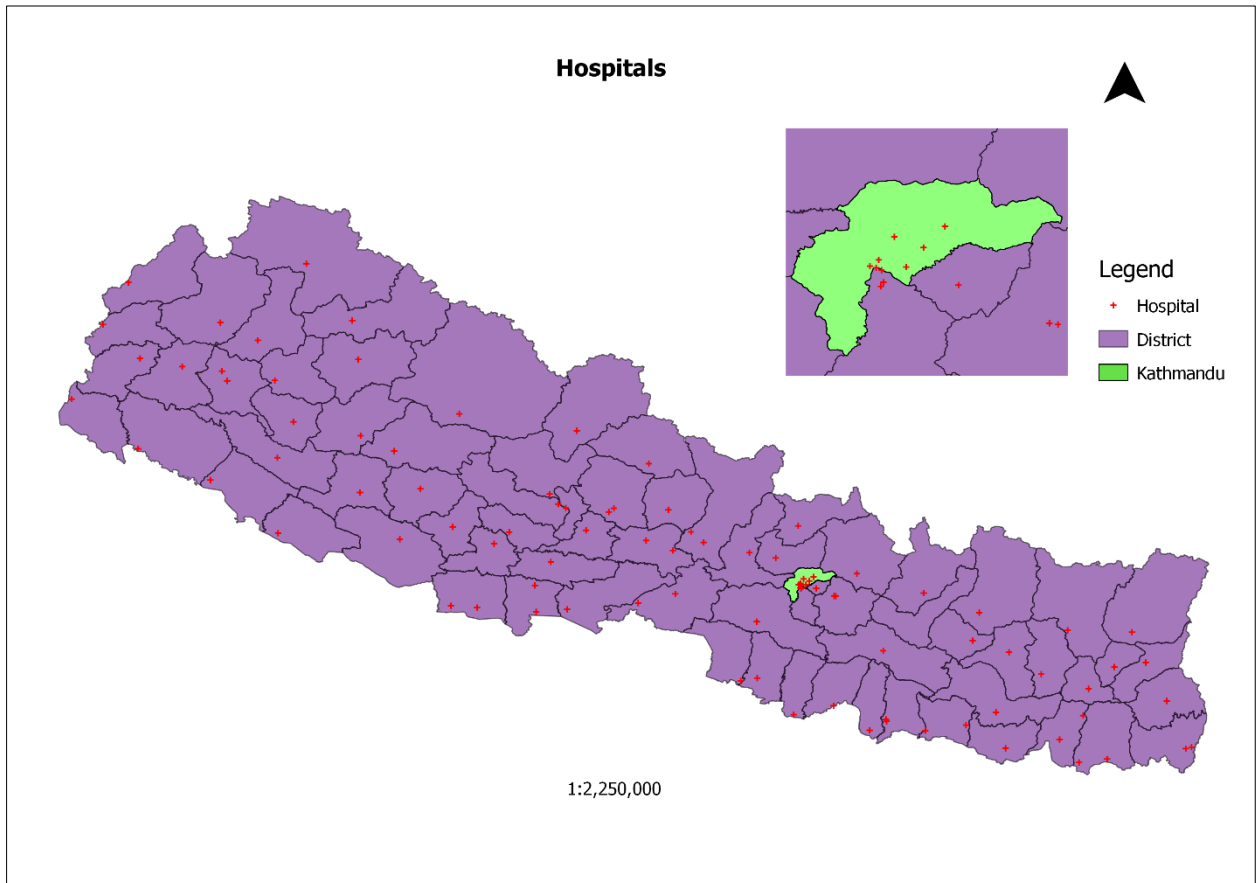- Go to the QGIS main window. Select Kathmandu using "Select Single Feature".

- Right click "District" on the Layers box. Select "Save Selection As…" and save your data as "Kathmandu.shp" under the same folder "workspace". Check mark "Add saved file to map".

- You can now see a new layer "Kathmandu" on the Layers box. Right click "Kathmandu" and select "Zoom to Layer Extent".
- Double-click the layer and change the colour to green.

- On your print composer, click on "Add new map" and draw a rectangle where you want to insert the inset map. Set the scale and extent of the inset map. You can also see that a new legend has been added to your legend box.
- The map making process is towards the end. Once you have all the map contents, you can export it as an Image, PDF or SVG. For this tutorial, let's export it as a PNG image. Go to "Composer" > "Export as Image". Save it under a file name "hospital_map" on your local drive. Your map will look like below.

In this tutorial we learnt the basics of map styling. Try to use all the vector files in the main project window, symbolize them and create a map that effectively communicates all the data we have. Try using different tools in the Print Composer window and begin creating more beautiful maps.